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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/686,768	10/11/2000	Jeff Schulz	FORE-77	7087

7590 03/29/2005

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EXAMINER	
PHAN, MAN U	

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/686,768	SCHULZ, JEFF	
	Examiner	Art Unit	
	Man Phan	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6-13 and 16-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-13,16-23 and 25-28* is/are rejected.

7)☒ Claim(s) *24 and 29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to applicant's 01/06/2005 amendment in the application of Schulz for the "Dual optimality for different data rate backplane transfers" filed 10/11/2000. This application is a Request for Continued Examination (RCE) under C.F.R. 1.114 filed on January 06, 2005. The proposed amendment to the claims and response have been entered and made of record. Claims 4, 5, 14, 15 have been canceled per applicant's request, and claims 1, 11, 16 have been amended. New claims 20-29 have been added. Claims 1-3, 6-13, 16-29 are pending in the application.

Claim Rejections - 35 USC ' 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 11 recites limitation "the bus" and "N equals 4" in the last line of claims.

There is insufficient antecedent basis for these limitations in the claims. The parameter N is not defined in the claims. It's not clear as to what N represent for.

Claim Rejections - 35 USC ' 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior

art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 20-23 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bianchini, Jr. et al. (US#6,463,063) in view of Dempsey (US#6,526,021).

With respect to claims 20-23, both Bianchini, Jr. et al. (US#6,463,063) and Dempsey (US#6,526,021) disclose a novel method and system for the transfer of data of connections at various rate, especially in exchanging traffic between OC48 and OC192 ports, according to the essential features of the claims. Bianchini, Jr. provides in Fig. 7 a schematic diagram illustrated a switching system for transferring data from an interface having a first rate (input port) over a connection mechanism having a second rate (output port). Bianchini Jr. discloses a switch 10 for switching fixed size ATM cells and variable length packets of a network 12. The switch 10 comprises an input port mechanism 14 having a plurality of input ports 16 each able to receive cells and packets from the network 12. The switch 10 comprises an output port mechanism 18 having a plurality of output ports 20 each able to send cells and packets to the network 12. The switch 10 comprises a switching fabric 22 connected to the input port mechanism 14 and the output port mechanism 18 for switching either packets or cells from any input port 16 to any output port 20. The switch 10 comprises a mechanism for converting packets to cells when the input port 16 is a packet port and the output port 20 is a cell port and cells to packets when the input port 16 is a cell port and the output port 20 is a packet port, respectively, or not converting cells or packets when the input port 16 and the output port 20 are both cell ports or both packet

ports, respectively. The converting occurs after the cell or packet has traversed this fabric. Preferably, the converting mechanism 24 is connected to the output port mechanism 18 and the switching fabric 22 (Col. 1, lines 40 plus). Bianchini further teaches in Fig. 2 an OC48 Port Card, in which the OC192 port card supports a single 10G stream to the fabric and between a 10G and 20G egress stream. This board also uses 4 stripers and 4 unstriper, but the 4 chips operate in parallel on a wider data bus. The data sent to each fabric is identical for both OC48 and OC192 ports so data can flow between the port types without needing special conversion functions (dividing the higher data rate connections into data pipes having the same rate as the data pipes formed from the lower rate connections) (See also Fig. 8; Col. 8, lines 53 plus).

Bianchini, Jr. differs from the claims in that the claims require the connection mechanism to send or receive data from the fabric (switching) by separating data received at the second rate into streams of data that together equal the data received at the second port card (*same rate as the lower rate connections*). In the same field of endeavor, Dempsey (US#6,526,021) provides a system and method for transporting synchronous optical network data more rapidly using an N terminal high speed transport system coupled between 1:N low speed transport systems. Dempsey teaches in Fig. 3 illustrated the clear channel transport system that increases the transport capacity per channel by multiplexing each lower rate working channel of a low rate transport system into separate higher rate channels of a clear channel high rate SONET transport system. With reference to Fig. 3, terminal 20 can transmit OC48 SONET transport signal W.sub.11 across working channel 22 to high speed terminal 110. Likewise, terminal 30 sends transport signal W.sub.21 across channel 32, terminal 40 sends transport signal W.sub.31, across channel 42, and terminal So sends transport signal W.sub.41 across channel 52 to high speed

terminal 110. High speed terminal 110 will receive each of the incoming transport signals W.sub.11, W.sub.21, W.sub.31, and W.sub.41 and will electrically package these signals as one OC192 signal W.sub.1 and transport the entire signal W, to high speed terminal 150 across working channel 115. This electronic packaging can be done through electrical multiplexing or, alternatively, through optical multiplexing (Col. 4, lines 52 plus).

Regarding claims 25-28, they are method claims corresponding to the apparatus claims 20-23 above. Therefore, claims 25-28 are analyzed and rejected as previously discussed with respect to claims 20-23.

One skilled in the art would have recognized the need for effectively and efficiently processing telecommunications signaling in SONET frame data between different line rates, and would have applied Dempsey's teaching of the SONET format signal transport system into Bianchini Jr.'s novel use of the a switch for switching both variable length packets and fixed length ATM cells of a network. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Dempsey's clear channel 1:N SONET transport system and method into Bianchini's receiver makes right with the motivation being to provide a method and system for performing transfer connections of SONET framed data between different line rates.

Allowable Subject Matter

5. Claims 1, 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

6. Claims 24 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is an examiner's statement of reasons for the indication of allowable subject matter: The prior art of record fails to disclose or suggest wherein the second port card maps the data received at the second rate onto the bus in 4 bit interleaved fashion, and N equals 4, as specifically recited in claims 24 and 29.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chong et al. (US# 5,983,278) discloses a low loss, fair bandwidth allocation flow control in a packet switch.

Phelps (US# 6,392,992) discloses a signal degrade oscillation control mechanism.

Spagnolo et al. (US# 6,526,024) discloses a synchronization of a synchronous back-pressure from one destination to multiple sources.

Quirke et al. (US# 6,654,370) discloses a backplane synchronization in a distributed system with clock drift and transport delay.

Witkowski et al. (US# 6,201,789) discloses a network switch with dynamic backpressure per port.

Simpson et al. (US#5,987,008) discloses an ATM switch.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149.

The examiner can normally be reached on Mon - Fri from 6:00 to 3:00 EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

03/21/2005.

MAN U. PHAN
PRIMARY EXAMINER